

§ 90.269**47 CFR Ch. I (10-1-96 Edition)**

(i) No limit shall be placed on the length or height above ground level of any commercially manufactured radiating transmission line when the transmission line is terminated in a non-radiating load and is routed at least 7 m. (20 ft.) interior to the edge of any structure or is routed below ground level.

(ii) Only sea-based stations, and central alarm stations operating on frequencies allocated for central station protection operations, may utilize antennas mounted not more than 7 m. (20 ft.) above a man-made supporting structure, including antenna structures.

(8) A hospital or health care institution holding a license to operate a radio station under this part may operate a medical radio telemetry device with an output power not to exceed 20 milliwatts without specific authorization from the Commission. All licensees operating under this authority must comply with the requirements and limitations set forth in this section.

(9) No assignment will be made on a frequency immediately adjacent to non-private radio service allocations.

(10) Frequencies from 462.7375 MHz to 462.9375 MHz and 464.9875 MHz to 465.0125 MHz are not available for authorization.

(11) Frequencies from 460.900 MHz to 461.01875 MHz and 465.900 MHz to 466.01875 MHz are available only for listed central station protection services and subject to § 90.75(c)(27) and (41).

[60 FR 37268, July 19, 1995, as amended at 61 FR 4235, Feb. 5, 1996]

§ 90.269 Use of frequencies for self-powered vehicle detectors.

(a) Frequencies bearing limitation (17) in the frequency table § 90.23(b) may be used for the operation of self-powered vehicle detectors by licensees of base/mobile stations in any of the Public Safety Radio Services in accordance with the following conditions:

(1) All stations are limited to 100 milliwatts carrier power and 20K00F7W, 20K00F7X, 20K00F8W, 20K00F8X, 20K00F9W or 20K00F9X emissions. The frequency deviation shall not exceed 5 kHz. No more than two 30 ms. pulses may be emitted for each vehicle sensed.

(2) The transmitters must be crystal controlled with a frequency tolerance of plus or minus .005% from -20° to plus 50° C. They must be type accepted.

(3) The total length of the transmission line plus antenna may not exceed one-half wavelength and must be integral with the unit.

(4) All operation shall be on a secondary, non-interference basis.

(b) [Reserved]

[48 FR 54982, Dec. 8, 1983, as amended at 54 FR 38681, Sept. 20, 1989]

§ 90.273 Availability and use of frequencies in the 421-430 MHz band.

The frequency bands 422.1875-425.4875 MHz and 427.1875-429.9875 MHz are available for use in the Detroit, Michigan and Cleveland, Ohio areas. The bands 423.8125-425.4875 MHz and 428.8125-429.9875 MHz are available for use in the Buffalo, New York area. Sections 90.273 through 90.281 address the specific rules applicable to these bands. Use of these bands is also subject to the general technical standards and application procedures contained in other subparts of part 90. The technical standards applicable in this band are the same as those contained in subpart I of part 90 for the 450-470 MHz band. Private land mobile use of these frequencies is subject to accepting any interference from Federal Government radiolocation operations.

(a) The following tables list frequencies available for assignment in the public safety, business or industrial/land transportation pools as indicated. In the tables, the public safety pool is denoted as "PS", the business pool as "B", and the industrial/land transportation pool as "I/LT." The frequencies 422.19375 MHz through 424.99375 MHz are paired with frequencies 427.19375 MHz through 429.99375 MHz, respectively. Only the lower half of each frequency pair, available for base station operation, is listed in the tables. Corresponding mobile and control station frequencies are 5 MHz higher than the base station frequency. The frequencies 425.000 through 425.48125 are unpaired and are available for either single frequency dispatch or paging operations.

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TABLE 1.—CHANNELS AVAILABLE IN DETROIT
AND CLEVELAND AREAS ONLY

Frequency (MHz)	Pool in which assigned
Paired channels:	
422.19375*	I/LT
422.200	I/LT
422.20625*	I/LT
422.21250	I/LT
422.21875*	I/LT
422.225	I/LT
422.23125*	I/LT
422.23750	I/LT
422.24375*	I/LT
422.250	I/LT
422.25625*	I/LT
422.26250	I/LT
422.26875*	I/LT
422.275	I/LT
422.28125*	I/LT
422.28750	I/LT
422.29375*	I/LT
422.300	I/LT
422.30625*	I/LT
422.31250	I/LT
422.31875*	I/LT
422.325	I/LT
422.33125*	I/LT
422.33750	I/LT
422.34375*	I/LT
422.350	I/LT
422.35625*	I/LT
422.36250	I/LT
422.36875*	I/LT
422.375	I/LT
422.38125*	I/LT
422.38750	I/LT
422.39375*	I/LT
422.400	I/LT
422.40625*	I/LT
422.41250	I/LT
422.41875*	I/LT
422.425	I/LT
422.43125*	I/LT
422.43750	I/LT
422.44375*	I/LT
422.450	I/LT
422.45625*	I/LT
422.46250	I/LT
422.46875*	I/LT
422.475	I/LT
422.48125*	I/LT
422.48750	I/LT
422.49375*	I/LT
422.500	I/LT
422.50625*	I/LT
422.51250	I/LT
422.51875*	I/LT
422.525	I/LT
422.53125*	I/LT
422.53750	I/LT
422.54375*	I/LT
422.550	I/LT
422.55625*	I/LT
422.56250	I/LT
422.56875*	I/LT
422.575	I/LT
422.58125*	I/LT
422.58750	I/LT
422.59375*	I/LT
422.600	B
422.60625*	B
422.61250	B
422.61875*	B

TABLE 1.—CHANNELS AVAILABLE IN DETROIT
AND CLEVELAND AREAS ONLY—Continued

Frequency (MHz)	Pool in which assigned
422.625	B
422.63125*	B
422.63750	B
422.64375*	B
422.650	B
422.65625*	B
422.66250	B
422.66875*	B
422.675	B
422.68125*	B
422.68750	B
422.69375*	B
422.700	B
422.70625*	B
422.71250	B
422.71875*	B
422.725	B
422.73125*	B
422.73750	B
422.74375*	B
422.750	B
422.75625*	B
422.76250	B
422.76875*	B
422.775	B
422.78125*	B
422.78750	B
422.79375*	B
422.800	B
422.80625*	B
422.81250	B
422.81875*	B
422.825	B
422.83125*	B
422.83750	B
422.84375*	B
422.850	B
422.85625*	B
422.86250	B
422.86875*	B
422.875	B
422.88125*	B
422.88750	B
422.89375*	B
422.900	B
422.90625*	B
422.91250	B
422.91875*	B
422.925	B
422.93125*	B
422.93750	B
422.94375*	B
422.950	B
422.95625*	B
422.96250	B
422.96875*	B
422.975	B
422.98125*	B
422.98750	B
422.99375*	B
423.000	PS
423.00625*	PS
423.01250	PS
423.01875*	PS
423.025	PS
423.03125*	PS
423.03750	PS
423.04375*	PS
423.050	PS
423.05625*	PS

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TABLE 1.—CHANNELS AVAILABLE IN DETROIT
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Frequency (MHz)	Pool in which assigned
423.06250	PS
423.06875*	PS
423.075	PS
423.08125*	PS
423.08750	PS
423.09375*	PS
423.100	PS
423.10625*	PS
423.11250	PS
423.11875*	PS
423.125	PS
423.13125*	PS
423.13750	PS
423.14375*	PS
423.150	PS
423.15625*	PS
423.16250	PS
423.16875*	PS
423.175	PS
423.18125*	PS
423.18750	PS
423.19375*	PS
423.200	PS
423.20625*	PS
423.21250	PS
423.21875*	PS
423.225	PS
423.23125*	PS
423.23750	PS
423.24375*	PS
423.250	PS
423.25625*	PS
423.26250	PS
423.26875*	PS
423.275	PS
423.28125*	PS
423.28750	PS
423.29375*	PS
423.300	PS
423.30625*	PS
423.31250	PS
423.31875*	PS
423.325	PS
423.33125*	PS
423.33750	PS
423.34375*	PS
423.350	PS
423.35625*	PS
423.36250	PS
423.36875*	PS
423.375	PS
423.38125*	PS
423.38750	PS
423.39375*	PS
423.400	PS
423.40625*	PS
423.41250	PS
423.41875*	PS
423.425	PS
423.43125*	PS
423.43750	PS
423.44375*	PS
423.450	PS
423.45625*	PS
423.46250	PS
423.46875*	PS
423.475	PS
423.48125*	PS
423.48750	PS
423.49375*	PS

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TABLE 1.—CHANNELS AVAILABLE IN DETROIT
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Frequency (MHz)	Pool in which assigned
423.500	PS
423.50625*	PS
423.51250	PS
423.51875*	PS
423.525	PS
423.53125*	PS
423.53750	PS
423.54375*	PS
423.550	PS
423.55625*	PS
423.56250	PS
423.56875*	PS
423.575	PS
423.58125*	PS
423.58750	PS
423.59375*	PS
423.600	PS
423.60625*	PS
423.61250	PS
423.61875*	PS
423.625	PS
423.63125*	PS
423.63750	PS
423.64375*	PS
423.650	PS
423.65625*	PS
423.66250	PS
423.66875*	PS
423.675	PS
423.68125*	PS
423.68750	PS
423.69375*	PS
423.700	PS
423.70625*	PS
423.71250	PS
423.71875*	PS
423.725	PS
423.73125*	PS
423.73750	PS
423.74375*	PS
423.750	PS
423.75625*	PS
423.76250	PS
423.76875*	PS
423.775	PS
423.78125*	PS
423.78750	PS
423.79375*	PS
423.800	PS
423.80625*	PS

* This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

TABLE 2.—CHANNELS AVAILABLE IN BUFFALO,
DETROIT AND CLEVELAND AREAS

Frequency (MHz)	Pool in which assigned
Paired channels:	
423.81875*	PS
423.825	PS
423.83125*	PS
423.83750	PS
423.84375*	PS
423.850	PS
423.85625*	PS
423.86250	PS

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TABLE 2.—CHANNELS AVAILABLE IN BUFFALO,
DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
423.86875*	PS
423.875	PS
423.88125*	PS
423.88750	PS
423.89375*	PS
423.900	PS
423.90625*	PS
423.91250	PS
423.91875*	PS
423.925	PS
423.93125*	PS
423.93750	PS
423.94375*	PS
423.950	PS
423.95625*	PS
423.96250	PS
423.96875*	PS
423.975	PS
423.98125*	PS
423.98750	PS
423.99375*	PS
424.000	PS
424.00625*	PS
424.01250	PS
424.01875*	PS
424.025	PS
424.03125*	PS
424.03750	PS
424.04375*	PS
424.050	PS
424.05625*	PS
424.06250	PS
424.06875*	PS
424.075	PS
424.08125*	PS
424.08750	PS
424.09375*	PS
424.100	PS
424.10625*	PS
424.11250	PS
424.11875*	PS
424.125	PS
424.13125*	PS
424.13750	PS
424.14375*	PS
424.150	PS
424.15625*	PS
424.16250	PS
424.16875*	PS
424.175	PS
424.18125*	PS
424.18750	PS
424.19375*	PS
424.200	PS
424.20625*	PS
424.21250	PS
424.21875*	PS
424.225	PS
424.23125*	PS
424.23750	PS
424.24375*	PS
424.250	PS
424.25625*	PS
424.26250	PS
424.26875*	PS
424.275	PS
424.28125*	PS
424.28750	PS
424.29375*	PS
424.300	PS

TABLE 2.—CHANNELS AVAILABLE IN BUFFALO,
DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
424.30625*	PS
424.31250	PS
424.31875*	PS
424.325	PS
424.33125*	PS
424.33750	PS
424.34375*	PS
424.350	PS
424.35625*	PS
424.36250	PS
424.36875*	PS
424.375	PS
424.38125*	PS
424.38750	PS
424.39375*	PS
424.400	I/LT
424.40625*	I/LT
424.41250	I/LT
424.41875*	I/LT
424.425	I/LT
424.43125*	I/LT
424.43750	I/LT
424.44375*	I/LT
424.450	I/LT
424.45625*	I/LT
424.46250	I/LT
424.46875*	I/LT
424.475	I/LT
424.48125*	I/LT
424.48750	I/LT
424.49375*	I/LT
424.500	I/LT
424.50625*	I/LT
424.51250	I/LT
424.51875*	I/LT
424.525	I/LT
424.53125*	I/LT
424.53750	I/LT
424.54375*	I/LT
424.550	I/LT
424.55625*	I/LT
424.56250	I/LT
424.56875*	I/LT
424.575	I/LT
424.58125*	I/LT
424.58750	I/LT
424.59375*	I/LT
424.600	I/LT
424.60625*	I/LT
424.61250	I/LT
424.61875*	I/LT
424.625	I/LT
424.63125*	I/LT
424.63750	I/LT
424.64375*	I/LT
424.650	I/LT
424.65625*	I/LT
424.66250	I/LT
424.66875*	I/LT
424.675	I/LT
424.68125*	I/LT
424.68750	I/LT
424.69375*	I/LT
424.700	B
424.70625*	B
424.71250	B
424.71875*	B
424.725	B
424.73125*	B
424.73750	B

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TABLE 2.—CHANNELS AVAILABLE IN BUFFALO,
DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
424.74375*	B
424.750	B
424.75625*	B
424.76250	B
424.76875*	B
424.775	B
424.78125*	B
424.78750	B
424.79375*	B
424.800	B
424.80625*	B
424.81250	B
424.81875*	B
424.825	B
424.83125*	B
424.83750	B
424.84375*	B
424.850	B
424.85625*	B
424.86250	B
424.86875*	B
424.875	B
424.88125*	B
424.88750	B
424.89375*	B
424.900	B
424.90625*	B
424.91250	B
424.91875*	B
424.925	B
424.93125*	B
424.93750	B
424.94375*	B
424.950	B
424.95625*	B
424.96250	B
424.96875*	B
424.975	B
424.98125*	B
424.98750	B
424.99375*	B
Single channels:	
425.000	B
425.00625*	B
425.01250	B
425.01875*	B
425.025	B
425.03125*	B
425.03750	B
425.04375*	B
425.050	B
425.05625*	B
425.06250	B
425.06875*	B
425.075	B
425.08125*	B
425.08750	B
425.09375*	B
425.100	B
425.10625*	B
425.11250	B
425.11875*	B
425.125	IL/T
425.13125*	IL/T
425.13750	IL/T
425.14375*	IL/T
425.150	IL/T
425.15625*	IL/T
425.16250	IL/T
425.16875*	IL/T

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TABLE 2.—CHANNELS AVAILABLE IN BUFFALO,
DETROIT AND CLEVELAND AREAS—Continued

Frequency (MHz)	Pool in which assigned
425.175	IL/T
425.18125*	IL/T
425.18750	IL/T
425.19375*	IL/T
425.200	IL/T
425.20625*	IL/T
425.21250	IL/T
425.21875*	IL/T
425.225	IL/T
425.23125*	IL/T
425.23750	IL/T
425.24375*	IL/T
425.250	PS
425.25625*	PS
425.26250	PS
425.26875*	PS
425.275	PS
425.28125*	PS
425.28750	PS
425.29375*	PS
425.300	PS
425.30625*	PS
425.31250	PS
425.31875*	PS
425.325	PS
425.33125*	PS
425.33750	PS
425.34375*	PS
425.350	PS
425.35625*	PS
425.36250	PS
425.36875*	PS
425.375	PS
425.38125*	PS
425.38750	PS
425.39375*	PS
425.400	PS
425.40625*	PS
425.41250	PS
425.41875*	PS
425.425	PS
425.43125*	PS
425.43750	PS
425.44375*	PS
425.450	PS
425.45625*	PS
425.46250	PS
425.46875*	PS
425.475	PS
425.48125*	PS

* This frequency is not available until August 18, 1996. After August 18, 1996 this frequency will be assigned with an authorized bandwidth not to exceed 6 kHz.

(b) Channels in the public safety pool are available for assignment to eligibles in the Public Safety and Special Emergency Radio Services. Channels in the industrial/land transportation pool are available for assignment to eligibles in the Power, Petroleum, Forest Products, Film and Video Production, Relay Press, Special Industrial, Manufacturers, Telephone Maintenance, Motor Carrier, Railroad, Taxicab, and Automobile Emergency Radio Services.

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Channels in the business pool are available to eligibles in the Business Radio Service.

(c) Base or control stations shall be located within 48 km (30 miles) of the center of Buffalo or 80 km (50 miles) of the center of Detroit. In Cleveland, base or control stations will be allowed at locations north of line A that are within 48 km (30 miles) of the city center. In addition, low power (2 watts or less) base stations may locate within 80 km (50 miles) of the center of Buffalo. The following coordinates shall be used for the centers of these areas:

Buffalo, NY	42°52'52" North latitude. 78°52'21" West longitude.
Cleveland, OH	41°29'51" North latitude. 81°41'50" West longitude.
Detroit, MI	42°19'48" North latitude. 83°02'57" West longitude.

(d) Mobile operation shall be confined to within 80 km (50 miles) of the centers of Detroit, Cleveland, or Buffalo.

[52 FR 6156, Mar. 2, 1987, as amended at 54 FR 38681, Sept. 20, 1989; 58 FR 31476, June 3, 1993; 58 FR 44957, Aug. 25, 1993; 60 FR 37269, July 19, 1995; 61 FR 6576, Feb. 21, 1996]

§ 90.275 Selection and assignment of frequencies in the 421-430 MHz band.

Applicants must specify the frequencies on which the proposed system will operate pursuant to a recommendation by the frequency coordinator designated for the pool in which the requested frequency is assigned.

[52 FR 6157, Mar. 2, 1987]

§ 90.277 Interpool sharing of 421-430 MHz frequencies.

In the business pool and the industrial/land transportation pool, applicants in one pool may have access to channels in the other pool after March 30, 1988 under the following conditions:

(a) There are no satisfactory channels in the applicant's own pool, as determined by the frequency coordinator for that pool; and

(b) Channels in the pool from which the applicant wishes to obtain a channel must be available in the proposed area of operation, as determined by the frequency coordinator for that pool.

[52 FR 6157, Mar. 2, 1987]

§ 90.279 Power limitations applicable to the 421-430 MHz band.

(a) Base station authorizations in the 421-430 MHz band will be subject to Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limitations as shown in the table below. ERP is defined as the product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction. EAH is calculated by subtracting the Assumed Average Terrain Elevation (AATE) as listed in table 7 of § 90.619 from the antenna height above mean sea level.

LIMITS OF EFFECTIVE RADIATED POWER (ERP) CORRESPONDING TO EFFECTIVE ANTENNA HEIGHTS (EAH) OF BASE STATIONS IN THE 421-430 MHZ BAND

Effective antenna height (EAH) in meters (feet)	Maximum effective radiated power (ERP) (watts)
0-152 (0-500)	250
Above 152-305 (above 500-1000)	150
Above 305-457 (above 1000-1500)	75
Above 457-610 (above 1500-2000)	40
Above 610-762 (above 2000-2500)	20
Above 762-914 (above 2500-3000)	15
Above 914-1219 (above 3000-4000)	10
Above 1219 (above 4000)	5

(b) The maximum transmitter power output that will be authorized for control stations is 20 watts.

[52 FR 6157, Mar. 2, 1987, as amended at 58 FR 44957, Aug. 25, 1993]

§ 90.281 Restrictions on operational fixed stations in the 421-430 MHz band.

(a) Except for control stations, operational fixed facilities will not be authorized in the 421-430 MHz band. This does not preclude secondary fixed tone signaling and alarm operations authorized in § 90.235.

(b) Control stations associated with one or more mobile relay stations will be authorized only on the assigned frequency of the associated mobile station. Use of a mobile service frequency by a control station of a mobile relay system is subject to the condition that harmful interference shall not be